

Amendments to the Claims

Claim 1. (original) An isolated and purified pathogenic bovine enterovirus.

Claim 2. (currently amended) The isolated and purified pathogenic bovine enterovirus of Claim 1 wherein said pathogenic bovine enterovirus has ATCC deposit number ~~H-33555A~~ PTA-6306.

Claim 3. (currently amended) The isolated and purified pathogenic bovine enterovirus of Claim 1 wherein said pathogenic bovine enterovirus is characterized as being insensitive to ether and having a size smaller than 30 nm, said pathogenic bovine enterovirus being specifically reactive with serum antibodies from a bovine, said serum antibodies obtained by intranasally inoculating a bovine with pathogenic bovine enterovirus ATCC deposit number ~~H-33555A~~ PTA-6306 and collecting serum antibodies from the inoculated bovine 25 to 40 days after inoculation.

Claim 4. (original) An immunogenic composition comprising the pathogenic bovine enterovirus of Claim 1 wherein said pathogenic bovine enterovirus has been attenuated.

Claim 5. (original) An immunogenic composition comprising the pathogenic bovine enterovirus of Claim 1 wherein said pathogenic bovine enterovirus has been inactivated.

Claim 6. (currently amended) An immunogenic composition comprising the pathogenic bovine enterovirus of Claim 1 wherein said pathogenic bovine enterovirus has ATCC deposit number ~~H-33555A~~ PTA-6306 and wherein said pathogenic bovine enterovirus has been attenuated or inactivated.

Claim 7. (currently amended) An immunogenic composition for generating an immune response in a bovine comprising:

an inactivated virus which is the causative agent for pathogenic bovine enterovirus disease, said virus characterized as being insensitive to ether and having a size smaller than 30 nm, said virus being specifically reactive with serum antibodies from a bovine, said serum antibodies obtained by intranasally inoculating a bovine with pathogenic bovine enterovirus ATCC deposit number ~~H-33555A~~ PTA-6306 and collecting serum antibodies from the inoculated bovine 25 to 40 days after inoculation.

Claim 8. (currently amended) An immunogenic composition for generating an immune response in a bovine comprising:

an attenuated virus which is the causative agent for pathogenic bovine enterovirus disease, said virus characterized as being insensitive to ether and having a size smaller than 30 nm, said virus being specifically reactive with serum antibodies from a bovine, said serum antibodies obtained by intranasally inoculating a bovine with pathogenic bovine enterovirus ATCC deposit number ~~H-33555A~~ PTA-6306 and collecting serum antibodies from the inoculated bovine 25 to 40 days after inoculation.

Claim 9. (original) A method for producing the immunogenic composition of Claim 4 comprising:
homogenizing tissue from bovine affected with pathogenic bovine enterovirus disease to form a homogenate which includes pathogenic bovine enterovirus; and
attenuating the pathogenic bovine enterovirus in the homogenate by a process comprising passaging the pathogenic bovine enterovirus through animal cells to form attenuated pathogenic bovine enterovirus which is non-zoopathogenic in bovine.

Claim 10. (original) A method for producing the immunogenic composition of Claim 4 comprising:
passaging the pathogenic bovine enterovirus through animal cells to form attenuated pathogenic bovine enterovirus which is non-zoopathogenic in bovine.

Claim 11. (original) A method for producing the immunogenic composition of Claim 5 comprising:
homogenizing tissue from bovine affected with pathogenic bovine enterovirus disease to form a homogenate which includes pathogenic bovine enterovirus;
inoculating a cell culture with the homogenate to grow up pathogenic bovine enterovirus;
harvesting pathogenic bovine enterovirus from the cell culture; and
inactivating the pathogenic bovine enterovirus by adding an inactivating agent.

Claim 12. (original) A method for producing the immunogenic composition of Claim 5 comprising:
inactivating the pathogenic bovine enterovirus by adding an inactivating agent.

Claim 13. (currently amended) A method for diagnosing pathogenic bovine enterovirus disease in bovine comprising:
obtaining a lung tissue sample from the bovine;
forming a liquid homogenate of the sample;
immobilizing the liquid homogenate on a support;
adding a monoclonal antibody to the immobilized homogenate to form a complex with a viral agent in the liquid homogenate, wherein the monoclonal antibody specifically binds to a protein of pathogenic bovine enterovirus ATCC deposit number ~~H-33555A~~ PTA-6306; and detecting the complex, wherein the presence of the complex is indicative of the presence of pathogenic bovine enterovirus disease.

Claim 14. (currently amended) A method for diagnosing pathogenic bovine enterovirus disease in bovine comprising:
forming a liquid homogenate of a tissue sample from the bovine suspected of being infected with pathogenic bovine enterovirus;
adding a monoclonal antibody to the liquid homogenate to form a precipitated complex with a viral agent in the homogenate, wherein the monoclonal antibody specifically binds to a protein of pathogenic bovine enterovirus ATCC deposit number ~~H-33555A~~ PTA-

6306; and detecting the precipitated complex, wherein the presence of the precipitated complex is diagnostic of pathogenic bovine enterovirus disease.

Claim 15. (currently amended) A method for diagnosing pathogenic bovine enterovirus disease in bovine comprising:

- obtaining a lung tissue sample from the bovine;
- forming a liquid homogenate of the tissue sample;
- incubating the liquid homogenate with a cell preparation under conditions effective to culture the cells;
- processing the cultured cells to provide a cell scrapping;
- immobilizing the cell scrapping on a support;
- adding a monoclonal antibody to the immobilized cells scrapping to form a complex with a viral agent in the immobilized cells scrapping, wherein the monoclonal antibody specifically binds to a protein of pathogenic bovine enterovirus ATCC deposit number H-33555A PTA-6306; and
- detecting the complex, wherein the presence of the complex is diagnostic of pathogenic bovine enterovirus disease.

Claim 16. (currently amended) A method for diagnosing pathogenic bovine enterovirus comprising:

- obtaining a lung tissue sample from a bovine;
- immobilizing the lung tissue sample on a support;
- adding a monoclonal antibody to the immobilized lung tissue sample to form a complex with a viral agent in the immobilized lung tissue sample, wherein the monoclonal antibody specifically binds to a protein of pathogenic bovine enterovirus ATCC deposit number H-33555A PTA-6306; and
- detecting the complex, wherein the presence of the complex is diagnostic of pathogenic bovine enterovirus disease.

Claim 17. (currently amended) A method of generating an immune response in a bovine against pathogenic bovine enterovirus comprising administering the immunogenic composition of ~~Claims 4, 5, or 6~~ Claim 4 to a bovine.

Claim 18. (currently amended) A monoclonal antibody that binds to a protein of pathogenic bovine enterovirus ATCC deposit number H-33555A PTA-6306.